



△ SHARP GAS WEATHER BALLOONS AND VENUS IN THE DAYTIME △

is a one-shot published by the Albuquerque S-F club (Leon Hale, Moderator, 3909 Martin SW, Aq) for distribution to its members, FAPA, and others.

AS YOU WELL KNOW ISH

Leon Hale, who carries the hammer, has asked me to postedit this one-shot. That means primarily writing this page. The spelling etc herein are the opinions of the respective writers and do not necessarily reflect those of the management.

This may be the longest one-shot on record. I don't mean in page-count nor in the odds against it, but in the time elapsed between pulling the trigger and the bullet's emergence. It was at the November 1966 meeting of the club in UFO House (Leon makes kites) that ideas were invited for future programs and Roy Tackett spoke the dread words, "Let's put out a one-shot." For the next couple of months, members cut stencils on their own, and some of these were passed around at the monthly meetings. Finally, on 4 February 1967, the stencils are being run off in the office of the Kit Carson Council BSA, where Hale works, by him and your obedient servant, with help at the collater expected from Bob Vardeman when he finishes a civil service exam and gets here.

Done on an IBM Selectric, and we don't know how to disengage the ribbon.

JFS

<u>A PAGE TITLED "ED COX FOR TAFF"</u> by Roy Tackett	1
OPINION by Kay Anderson	2
SCIENCE FICTION AND THE FASTER-THAN-LIGHT SPACEDRIVE by Gary Anderson	3
<u>An Exploration of the Planet Vulcan</u> by Bob Vardeman	4
comments on Tolkien by Cris Abbott	5
CULTURE YET by Jack Spear	6
Sex and Edgar Rice Burroughs by C. W. Wolfe	7
<u>THE FUTURE IN BOOKS</u> by Gordon Benson	8
LESS FAITASTIC by Jack Spear	9

Cover by Leon Hale

by

ROY TACKETT

There is really no particular reason why this page of the Albuquerque SF Club's one-shot should be titled "Ed Cox for TAFF". But then there isn't any reason why it shouldn't be titled "Ed Cox for TAFF", either. Actually this is supposed to be all about the Albuquerque SF Club which has nothing at all to do with Ed Cox for TAFF. Except, of course, that I shall be doing my all to get the club to support Ed Cox for TAFF.

I really don't know what the rest of the Albuquerque group is writing about, if anything, but I suppose there should be some sort of explanation as to how it all came about. The Club, that is.

Once upon a time there was old fan and tired named Roytac who, after many years of traveling hither and yon, decided that settle in the Village of Los Ranchos de Albuquerque. Being a trufan--his blood ran green--this Roytac decided that it would be nice if he could contact the science-fictionists in the area with the object to converting them to fen, if possible. So he took a leaf from the book of successful capitalism and A*D*V*E*R*T*I*S*E*D. Yes. He invested a certain amount of monies in an advertisement in the classified section of THE MAGAZINE OF FANTASY AND SCIENCE FICTION urging all SF readers in the Albuquerque area to contact him. Then he sat back and waited. And waited. And waited. One day there came a letter from Chicago. A man there wanted to join the Albuquerque SF Club. Another letter came from the University of Massachusetts. The SF Club there wanted to set up a reciprocal trade agreement. This Roytac then decided that something else was needed. He approached the public library and through bribery and coercion got an Assistant Librarian, (3d class), to permit him to post a notice over the stf shelves. And waited and waited and waited.

And decided that he must be the only one around interested in stf.

(Why did you start a new paragraph there? Well, you see I had to straighten out the stencil....)

Anyway through various means and methods this Roytac did manage to make contact with such as Eugene Casey, first editionist, Gordon Benson, collector, and Bob Vardeman, nut. One day Leon Hale, vile huckster, met Gordon Benson, collector, and made inquiries about SF readers. Benson referred this Hale chap to old and tired Roytac and all of a sudden the whole thing fell together and the Albuquerque SF Club came into existence. Membership now stands (all except Tackett who prefers to sit, being old and tired) at about 10 or so. The club elected Roytac its first "Moderator" and after six-eight months he turned the gavel over to Leon Hale, vile huckster, who now leads the club.

Rather an informal group, the Albuquerque SF Club, meeting about once a month--which isn't often enough--with nothing in the way of formal programming. Mostly gabfests. Biggest club event so far occurred last April when a dinner was held for Don Wollheim and Jack Williamson. Credit for setting that up goes to Woody Wolfe, that ancient fantasite, who has stacks of stfzines going back to the beginning and then some. The club's most famous member is the reknowned eofan, charter FAFAN, historian and encyclopediast, and picker of nits, Jack Speer.

A BOOK REVIEW FOR BUCK COULSON.

AFTER THE RAIN by John Bowen. Ballentine Books #U2248. 50¢.
Soggy.

This has been a page titled "Ed Cox for TAFF". It was written for the Albuquerque SF Club's one-shot by completely shot Roy Tackett.

At the beginning of the fall season, television offered us three "science fiction" shows: It's About Time, The Time Tunnel, and Star Trek. I began to get inklings about It's About Time after one chorus of the theme song. The Time Tunnel lasted on my viewing list until I saw what their concept of time was, or rather wasn't. Star Trek, however, was more than I even hoped for. It is by far the best thing television has ever offered us in the much-abused name of science fiction.

Star Trek is the tale of an interstellar ship prowling the frontiers of the known galaxy on a five year exploratory mission. The starship Enterprise, designed with the aid of Caltech, looks like a starship should. The sets are functional and restrained and things do not short out dramatically, as they do on other "sf" shows, at the least lull in the script. Real live science fiction is spoken on the show, without being explained--or garbled--to death for the benefit of those in the viewing audience who do not read That Junk. Such terms as warp, force field, hyperspace, tractor beam, matter transmitter, subspace, shuttle craft, and anti-matter have been used intelligently and appropriately in the scripts. Such pros as Robert Bloch, Richard Matheson, and Jerry Sohl have had scripts on the show.

Star Trek is well-cast and well-acted. One of the best things about the series is the excellent character they have come up with in the extraterrestrial first officer, Spock. He is intelligent, businesslike, and does not wear a monster suit; the series is worth watching for him alone.

Spock is from Vulcan, a large, arid planet with a higher gravity than Earth. We are told that he has green blood, although viewed in color there is no green in his skin tones; but we are also told that his mother was a human being from Earth. We are not told how the union of a human with a native Vulcanian, who in order to have green blood must have a radically different body chemistry, can produce any offspring at all. Apparently we just have to believe in Spock, but unlike most of the contradictions television science fiction asks us to accept, he is well worth the straining of credibility.

In the character itself and in the skill of acting the comparison that comes most readily to mind is the excellent job Michael Rennie did in The Day the Earth Stood Still, but Spock is a more difficult character than Klaatu. For one thing, he is almost expressionless alongside the other members of the crew. The Vulcanians have great emotional control, and while Spock, being half human, is consequently more emotional, most of the time his facial expressions are limited to a faint frown, a lifted eyebrow, or a narrowing of the eyes. In twelve episodes he has smiled four times. It is difficult for a poker face to maintain much interest, but Spock is somehow fascinating. If he is in a scene, he is the focus of attention. In his portrayal of Spock, Leonard Nimoy has taken a character that could so easily have been either ridiculous or robotic, and created a commanding personality of a credible alien. The pauses in his speech occur in strange places, so that you find yourself hanging on his words; by some subtle differences in the way he stands and moves he conveys the impression of a being living in a weaker gravity than he is accustomed to.

The Star Trek series should not be missed because it is what science fiction can be and so seldom is, and because it features so excellent a character as Spock.

Kay Anderson

SCIENCE FICTION AND THE FASTER-THAN-LIGHT SPACEDRIVE

The theme of faster-than-light travel is widely used in science fiction literature, and most stories concerning star travel employ this concept in one form or another. The authors have usually felt that they had considerable freedom to propose anything they wished, since science has little to say on the subject and the probability that they would be called to task for an error in this matter is very low, at least in their lifetime.

Yet, from our present knowledge of the physical universe, we may set down some criteria for a stardrive. The essential attribute of a stardrive is that it goes from one point in the universe to another point in the universe in less time than light. Preferably, this transfer would be accomplished without undue distortion of whatever is being moved.

In our universe, nothing may move faster than light. Experiment has confirmed this fact, and not all the wishing in the world will change this. Therefore, in order to travel faster than light, we must in some way violate the structure of the universe. This violation implies complete isolation, such that there exists no physical events in common.

Of course, this ruins the visions of stars sweeping rapidly by, and indeed obviates any observation at all of a position relative to our universe. To observe is to have some common event, and any continuous observation is thus ruled out.

There exists experimental and theoretical evidence that a stardrive is not a complete impossibility. First of all, there is the instantaneous shift of position of an electron when it is changing energy states. Admittedly, there is no obvious way to use this. But then, the use of Einstein's equations to build a nuclear weapon were not at all obvious, either.

There is much to be done before any real work on a stardrive can even be attempted. But the attitude of "It's impossible" is far too common among scientists today. The difference between a logical reservation and an emotional reaction seems to be hard for some to detect. Ah, well, scientists are also human beings.

This matter of the visual representation of what the starship sees while under drive is one of the few gripes against the Startrek set. Artistic license or something, I guess.

The actual construction of a stardrive, even theoretically, remains outside the present scope of our science. Indeed, it is likely to for some time. But there are some things we do know about the universe, and these facts may be applied to the problem to give a set of limit parameters, not in themselves definitive, but applying them will allow a little more accuracy in the representation of stardrives.

Gary Anderson

 Ed Cox doodle here

An Exploration of the Planet Vulcan

by Bob Vardeman

One of the most exasperating conditions facing us today is our lack of knowledge concerning that inimitable alien, Mr. Spock, and his home world, Vulcan. This article will attempt a preliminary deductive survey to determine such facts about Vulcan as can be arrived at by considering the only three certain pieces of knowledge we have of Spock. (1) Spock has a metabolism based on the metal copper (2) Spock has a height and apparent weight corresponding to that of an average Earthman (3) Spock has a peculiar ear development. Of these, only the second might be dependent on the Terran ancestor in Spock's lineage.

Of primary importance is the fact that Spock has a metabolism based on copper. Replacing the iron in the blood's hemoglobin with copper necessitates a higher temperature to liberate the attached oxygen atom. Consideration of the higher ionization energy of copper leads to the conclusion that Spock's body temperature is approximately 114.5° F. For the sake of comfort, then, Vulcan must have a higher average surface temperature than that of Earth. Calculations show 84.6° F. to be an appropriate value for Vulcan's mean surface temperature.

Logically the place to look for life similar to your own is on a similar planet orbiting a similar type sun and assumption #2 shows Vulcan to be like Earth in both size and gravity. Hence, Vulcan has a high probability of circling a G0 type star similar to Earth's Sol. Because the mean temperature is higher, more energy from the star must reach Vulcan. This can only happen if the world orbits closer to its star than Earth does to the Sun, 85.5 million miles being an average distance where the increase in temperature would match the 84.6°F. assumed.

If the average distance from Vulcan to its sun is 85.5 million miles, the year would be only 338 days, synodic Earth-reckoning. Further, the sun would be 18.5% brighter on Vulcan than on Earth causing a like increase in the amount of ultraviolet radiation penetrating to the surface of the planet. As pure speculation (based solely on Spock appearing paler than the other crew members), the ionosphere of Vulcan must absorb more of the UV than does Earth's.

Mr. Spock's ear development leads to the conclusion that the atmosphere of Vulcan is less dense than Earth's and that more acute hearing organs are needed to offset the slower speed of sound. An increase in ear size would increase the intensity of sound actually reaching the eardrum, but Spock's ears are not significantly larger which allows the assumption that Vulcan's and Earth's atmospheric densities vary but little. Assuming 60% nitrogen, 15% neon, 3% helium, 21% oxygen and 1% other gases yields a density of 1.25 grams per liter (compared with Earth's 78% nitrogen, 21% oxygen and 1% other gases giving a density of 1.33 grams per liter). The extra neon and helium in Vulcan's atmosphere could not affect life there (being inert gases), while the oxygen content is the same as on Earth thereby permitting an Earthman perfect ease and safety in breathing this content. Also another point favoring this composition is the prior guesswork assumption that Vulcan's atmosphere filters more UV than Earth's. The extra helium and neon, having ionization potentials higher than nitrogen, would have this effect.

In summation, we have discovered Vulcan to be Earth-size, to revolve around a G0 type star at a distance of 85.5 million miles, to have a 338 (Earth-reckoned) day year, to have a surface temperature of about 84.6°F., and to possess an atmosphere rich in inert gas.

The foregoing is by no means to be considered as a final, complete, or even accurate description of the planet Vulcan, but if it suggests a more comprehensive picture of this little known world, it will have served its purpose.

Ed Cox doodle in this space:

If you haven't read J.R.R.Tolkien's THE HOBBIT and THE LORD OF THE RINGS, this page will be practically incomprehensible. Now, I've given you a fair warning, so read on at your own risk.

While talking to someone who has read THE LORD OF THE RINGS you need only mention the word "hobbit" to get them babbling about "the Eye of Mordor", "Gollum", "Frodo Baggins", and other persons, places, and monsters which are baffling to you- unless, of course, you, like they, have been to Middle Earth, the world Tolkien has explored and mapped. It would be incorrect to say he invented it, because it has always been there. Middle Earth is a land where Dwarves, Elves, and other "mythological" people can be seen. Aragorn says of Lothlórien, an Elvish country, "Few come out who once go in; and of that few none have escaped unchanged." This could also be said of Middle Earth. I have never left it since I first entered through THE HOBBIT, and now I may find my mind walking the fair paths of Imladris or floating down the River Anduin in a grey Elvin-boat, when I'm supposed to be doing something else back in Albuquerque.

There are certain hazards in entering Middle Earth. Many times I've let the work pile up on my desk, while I, completely unaware, was away, groping my way through the blackness of the Mines of Moria, perhaps, or even wandering through the woods of the Shire. Middle Earth is filled with pitfalls for the unwary traveller, or even the wary one, for the power of the Dark Lord, Sauron is growing like a black shadow in the East, while the strength of the Free Peoples to resist have waned. The fate of all Middle Earth rests on the shoulders of Frodo Baggins, and his mission, which is to enter Mordor, Sauron's fortress-like country and destroy the One Ring of power, which can only be unmade by casting it into the Cracks of Doom in the Firey Mountain, which stands in Mordor. If the Ring is found by Sauron, the West will be utterly defeated, but if it is destroyed, He will be ~~utterly~~ destroyed, and his Dark Tower, the Barad- dûr will be pulled down.

CULTURE YET

Last week we went to the university to see a local production of Faust in English. There were some good demon ballets, but the intermissions were too long and so were the arias. While Ruth claimed to understand nearly every word, Margaret Ann and I were straining to figure out where we were in the synopsis. Back home, I studied the longer story summaries in such sources as Come to the Opera and an old Victor Book of the Opera. One thing led to another, and it reminded me of the days when people like Milt Rothman were writing articles about Fantasy in Music. What they generally meant was not the music, but the plots on which operas were based. Opera plots without music may be like Leeh's dehydrated water, but you do get most of the fantasy element that's present. Take for example this summary of Die Meister-Genossenschaft:

Scene: The Forests of Germany. Time: Antiquity.

Argument: The basis of "Die Meister-Genossenschaft" is an old legend of Germany which tells how the Whale got his Stomach.

Act 1. The Rhine at Low Tide Just Below Woldschnoffen---Immerglück has grown weary of always sitting on the same rock with the same fishes swimming by every day, and sends for Schwül to suggest something to do. Schwül asks her how she would like to have pass before her all the wonders of the world fashioned by the hand of man. She says, rotten. He then suggests that Ringblattz, son of Pflucht, be made to appear before her and fight a mortal combat with the Iron Duck. This pleases Immerglück and she summons to her the four dwarfs: Hot Water, Cold Water, Cool, and Cloudy. She bids them bring Ringblattz to her. They refuse, because Pflucht has at one time rescued them from being buried alive by acorns, and, in a rage, Immerglück strikes them all dead with a thunderbolt.

Act 2. A Mountain Pass--Repenting of her deed, Immerglück has sought advice of the giants, Offen and Besitz, and they tell her that she must procure the magic zither which confers upon its owner the power to go to sleep while apparently carrying on a conversation. This magic zither has been hidden for three hundred centuries in an old bureau drawer, guarded by the Iron Duck, and, although many have attempted to rescue it, all have died of a strange ailment just as success was within their grasp.

But Immerglück calls to her side Dampfboot, the tinsmith of the gods, and bids him make for her a tarnhelm or invisible cap which will enable her to talk to people without their understanding a word she says. For a dollar and a half extra Dampfboot throws in a magic ring which renders its wearer insensible. Thus armed, Immerglück starts out for Walhalla, humming to herself.

Act 3. The Forest Before the Iron Duck's Bureau Drawer--Merglitz, who has up till this time held his peace, now descends from a balloon and demands the release of Betty. It has been the will of Wotan that Merglitz and Betty should meet on earth and hate each other like poison, but Zweiback, the druggist of the gods, has disobeyed and concocted a love-potion which has rendered the young couple very unpleasant company. Wotan, enraged, destroys them with a protracted heat spell.

⌈About this time I became suspicious and looked and saw that it was by Robert Benchley. For lack of space, I skip to the end:⌋

But Frimsel overhears the plan and has a drink brewed which is given to Ragel ⌈the papercutter of the gods⌋ in a golden goblet and which, when drunk, makes him forget his past and causes him to believe that he is Schnorr, the God of Fun. While laboring under this spell, Ragel has a funeral pyre built on the summit of a high mountain and, after lighting it, climbs on top of it with a mandolin which he plays until he is consumed.

Immerglück never marries. ▲ ◀

by
C. W. Wolfe

In this day of modern fictional heroes like James Bond, Mike Hammer, Shell Scott, and a host of others, to whom we have given sanction by record sales of their stories, and in which we have come to accept their many amorous escapades and care-free behavior of, "love them and leave them," we now sometimes wonder why we thought the Old Master was so stimulating in the hey day of his writings, and is still in great favor judging by the reprint sales.

Actually, ERB wrote fantastic adventures, set in far away and oft-times imaginative places. His stories moved fast, were jam packed with cliff hanger episodes, nick of time rescues, and a host of improbable events, often necessary to save the hero, or heroine, from death, or in the latter case from, "the fate worse than---". ERB did not mind leading the reader to the very brink, but NEVER, NEVER, must the event actually happen. The policy was, "Virtue must always triumph."

Be it remembered that ERB was of the Victorian era of writers, contemporary with Zane Grey, James Oliver Curwood, and others. The girl was always sweet and pure, and her virtue was zealously guarded throughout the story. Even the hero was permitted few familiarities until the end of the story, when a chaste kiss and embrace were sanctioned. The hero spent his energies vanquishing the villains, his clean mind only occupied with thoughts of worship and adoration for his beloved. He would cut off his hand sooner than make an improper advance. Only the villains were allowed the luxury (?) of having rambunctious and lustful gonads. Their improper deportment was punished by death, prison, etc.

But even so, we must admire the Old Master for his skill in titillating the senses and creating excitement, all within the limits of the Victorian rules. Most of the characters wore few clothes, usually a BARE minimum. Ofttimes total nudity was mentioned. No description of bodily charms ever followed, but the reader's imagination soared. The heroines were always beautiful, and that was enough.

In view of the above, one can almost say there are no real sexy scenes in Burroughs' books. But a few scenes came "close" if we can use the word. But one gets the impression that ERB himself did not relish such scenes too well, perhaps felt awkward, and got out of them as soon as possible. For example, Tarzan, always the most moral character, and always repulsing the advances of La and others, only once became carried away by desire. In "Return of T." while he was still single, he fell under the seductive spell of the Countess de Coude, it finally culminating in a passionate kiss and embrace. But the Count arrives, a scene ensues, and Tarzan, thinking he has killed the Count, gives vent to the bull ape victory cry. A real fiasco. In "Tarzan the Terrible" there is a reunion scene with Jane, the first after two whole books, and who knows the time lapse. Tarzan finds Jane by chance through her individual "odor" he picks up some miles away. He finds Jane in a tree bower, climbs up, and says, "Heart of my Heart, it is I," (most beautiful grammar). Jane faints, recovers, and they "talk" all night. Though very legal, the reader must imagine the other action. In "Chessmen of Mars," John Carter's daughter, Tara, comes close to being ravished by a Kaldane, using a Rykor headless body, but happily, Tara is rescued in the nick of time. The Garden of Eden scene in Pellucidar, when David Innes finally wins Diane, is most thrilling and touching, but no intimate act is suggested. But readers will dream and the ERB books sold like mad.

Shame on the old biddy in that California school library who suggested that Tarzan and Jane lived in "Sin" without benefit of matrimony. She obviously had never read "Tarzan of the Apes/Return of Tarzan."

THE FUTURE IN BOOKS - Gordon Benson

Author	Title	Price	Publisher	Rating
Anderson	ORIDS WITHOUT STARS	.40	Ace	2/0
Elish	STAR TRAIL	.50	Lantam	2/1
Frackett	SLAND OF MARIATION	.40	Ace	1/0
Frabury	GOLDEN WHEELS OF THE SUN	.60	Lantam	3/1
	SCIENCE FIC. D F IS AY COLES	.75	"	3/1
Franner	OUT OF MY MIND	.60	Ball.	2/27
	PROJECTION OF TIME	.50	Ball	2/0
Chandler	CONTROLLED FROM OUTER SPACE	.50	Ace	1/0
Christopher	NO BLADE OF GRASS	.60	Avon	2/20
Clarke	CONING OF THE SPACE AGE	6.95	Feredith	3/3
	THIS TROLL	---	Bell	3/14
Clement	WEDDLE	.60	Avon	2/20
Davidson	WEST FASE:12th Series	.50	Ace	1/0
Del Rey	PAROVED OF STARS	.50	Pop.Lib.	2/15
Dick	COU TER-CLOCK CRID	.60	Berkley	2/2
	ZA GUN	.50	Pyramid	1/15
Dickson	SCIENCE FIC. (Rev.)	.40	Ace	2/0
	SPACE B I STARS	.60	Berkley	2/2
Fenton	EIG B WINERS	5.95	P-H	2/23
Henderson	THE MIRAGE	.60	Avon	1/20
Herbert	DUNE	.75	Ace	1/0
Jenkins	THE TUNNEL	.50	Pyr.	1/15
Jaumer	NINE BY NINER	3.95	DD	2/17
Leinster	THREE STORI S	3.95	DD	2/24
Lerritt	DELLERS IN THE MIRAGE	.60	Avon	3/20
Loskowitz	BEST PIECES OF SF	6.00	World	1/0
Robeson	MURDER IN BODY	.50	Lantam	1/1
	BOOK LEGION	.50	"	3/1
Saberhagen	BERSERK R	.60	Ball.	1/23
Sheckley	MINDS AP	--	Bell	1/3
Simak	WING AROUND THE SUN	.50	Avon	3/20
	WHY CALL THEM LACK FROM HEAVEN	3.95	DD	1/13
Taine	THE STRAIN	.50	Ace	2/0
Van Vogt	CHANGELING	.50	Acf.	2/0
	MASTERS OF TIME	.50	"	1/0
	200 MILLION A.D.	.50	Pop.Lib.	1/15
Wells	BEST SF OG H.G. WELLS	1.50	Dover	3/3
White	JEWELS OF LSE MEN	.50	Belmont	3/10
Williamson	LEGION OF SPACE	.60	Pyr.	2/15
	LEGION OF TIME	.60	"	3/15
Zelazny	FURITS AND OTHERS	.40	Ace	2/0

Conan (James Bond without manners-Tarzan without celibate morals) has finally burst upon the scene. Lancer's first volume of the Conan saga boasts a Frazetta cover depicting our hero as an ultra-masculine giant with a face to match his temper and lack of smarts. ERBuffs may like Lancer's flyer which says "...Howard, a superb writer who ranks with ERB;..." but they may not like the book's backcover which hails Conan as a "hero mightier than Tarzan." Never-the-less, welcome the splendid brute.

The 525-line 'opiate of the people' hasn't offered much this TV season. THE TUNNEL started at sea-level and quickly submerged. TARZAN is harmless-I preferred Hissmuller and O'Sullivan. Being no masochist, I avoid IT'S ABOUT TIME. STAR TREK is well produced and has mercifully few DEES. It also has two scrumptious lasses. Dr. Asimov has pointed out the errors in other shows recently in TV GUIDE. Alas, will the good doctor's speeches ever be the same now that he has a Hugo of his own? Ace's policy this year will be to reissue titles of proven popularity-no more real oldies for a while. Holy heavy-water! Something wicked this way comes! It's the bottom of the page. Kaor!

LESS FANTASTIC

9

Last Sunday the Albuquerque SF club went to a showing of *Fantastic Voyage*. Following that, we met at Woody's house and, after taking time out to watch Arthur C Clarke on *The Twenty-First Century*, picked the movie apart.

Afterward I read the book, and so did Roy. I think my daughter got her copy through a book club at school, which supports the theory that the movie aimed to tap the high-school science-class market. "Darn" and "heck" were about the strongest oaths in the dialog, which was more copious in the book than in the movie. The Bantam edition contained quite a few misprints, most numerous being omission of question marks, and also some errors that may be blamable on Asimov, assuming that he wrote the book: I remember most the use of "were" in conditions that were not contrary to fact, e.g. "It was going to be a strain if he were going to ..."

Roy says Asimov was not brought into the project until after the movie was finished. If his job was to support it after it was made, he did a remarkably good job. He saw and explained away all the errors that we discussed in the club meeting. As when I was turning the Buddy Deering comics into narrative for my own amusement, his patchwork consisted at times of explaining a difficulty that could be rationalized, and at other times of modifying the action or effects slightly, telling how they ought to have been. His biggest change in the story was to make Dr Michaels a friendly, talkative sort, through whose mouth many things could be described and explained.

At times, I suspect, Asimov found he couldn't justify something in the action or scenery when you came down to examining it quantitatively, so he fell back on qualitative explanations. An example of this was the time-rate difference between the Proteus and the outside world, which was something like 4:1, a quantity hard to justify except to gesture vaguely toward the mystery of how the miniaturization process worked. (He did not accomplish the miniaturization by packing atoms more closely together, but by, in effect, reducing their size.) He several times seemed bothered by the color of things in the movie, and rationalized the errors by unspecified effects of miniaturized light, etc.

One difficulty that has since occurred to me was not dealt with. Miniaturized persons, acting at a time-rate not greatly different from our own, would probably have to relearn walking, because they would fall their full length much faster; yet the book was specific that when the girl stumbled, Grant was able to catch her.

Asimov made one difficulty for himself that was not in the movie, I think. When they were sucking air from the patient's alveolus, he had the submarine's portable miniaturizer extend its field far into the operating room, reducing air and sucking it in to fill the buoyancy and breathing tanks. It would have been better to postulate that air was needed only for the buoyancy tanks, for which coarse air might serve.

On the other hand, Asimov saw and anticipated some difficulties that we missed. One was the greater fragility of the Proteus with its atoms reduced, as compared to normal microbes. I suspect that here again he turned his eyes away from exact calculation of the effects, knowing the subject would not stand too-close scrutiny. But it is something, to recognize the difficulty.

Science-fiction writers frequently have the problem of justifying scientifically the course of action they want for dramatic reasons. When this is increased to the job of justifying the specific action that has been written into a story by a previous team of writers, and special effects on which the writer was not consulted, the task is doubly difficult. I think Asimov acquitted himself in a way of which few can be proud.